


PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 17606.7-D2646-54-ne		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/EP2004/008574		International filing date (day/month/year) 30.07.2004	Priority date (day/month/year) 31.07.2003	
International Patent Classification (IPC) or national classification and IPC H04L29/06, H04W31/04, H04Q7/38				
Applicant T-MOBILE DEUTSCHLAND GMBH et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 5 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 18.02.2005		Date of completion of this report 03.11.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840		Authorized Officer Figiel, B Telephone No. +49 30 25901-473		



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/008574

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

2-9 as originally filed
1, 1a received on 27.04.2005 with letter of 26.04.2005

Claims, Numbers

1-11 received on 27.04.2005 with letter of 26.04.2005

Drawings, Sheets

1/2, 2/2 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/EP2004/008574

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	1-11
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Reasoned statement under Rule 43bis.1(a)(i)

1. It is considered that independent **claims 1 (method) and 9 (system)** relate to **new and inventive subject-matter (Articles 33(2) and (3) PCT)**, since the prior art does not disclose or suggest the specifically claimed transparent access authentication of subscribers.
- 1.1 The following document

D1: "Access security for IP-based services (Release 5)" 3GPP TS 33.203 V5.6.0, June 2003 (2003-06), pages 1-27,34, XP002264085 (acknowledged in the description),

is regarded as being the closest prior art and discloses a method for access authentication of subscribers (Authentication of an IM-subscriber; paragraph 6.1.1) connected to an authenticating network domain by a GPRS core network or an UMTS network (PS-Domain in figure 1; also figure 3), wherein the method using data which are assembled by a network layer during establishment of a PDP context in GPRS networks (IP address established during establishment of a primary PDP context is *used* for all further communication; this feature is disclosed implicit in document D1).
- 1.2 The problem with this prior art is that no authentication on application layer is foreseen in GPRS standard. Thus there is the need to provide a transparent access authentication of subscribers without requiring extensions on network or client side (description, page 1, lines 25-29 and page 2, lines 15-16).
- 1.3 The application solves this problem by providing the method with following steps:
 - when a Gateway GPRS Support Node (1) receives a context creation request it queries a registration server (2) to get an IP address assigned for the particular PDP context, and within the context the registration server (2) receives a Mobile Station ISDN Number, MSISDN, and/or an International Mobile Subscriber Identity, IMSI, of the subscriber and stores for each PDP context a pair of IP address and IMSI/MSISDN in a session database (3),

- a proxy server (5) is provided which checks IMSI/MSISDN from a registration server (2) session database (3) and IMSI/MSISDN from a application domain database (4) for match,
- if the IMSI/MSISDN pairs are matching, the proxy server (5) checks a subscribers IP address assigned in the IP network layer for match with the IP address assigned by the registration server (2), and
- the proxy server (5) parses the application layer for IP addresses given in the headers of registration messages and checks for match with the network layer IP address which was already checked for match with the IP address assigned by the registration server (2).

No prior art document anticipates the proposed solution.

- 1.4 Independent **claim 9** contains the corresponding features as the method of claim 1 expressed respectively in terms of the system. The argumentation of the points 1.1-1.3 applies mutatis mutandis also for this claim.
2. **Claims 2-4 and 6-11** are dependent respectively on claims 1 and 9 and therefore also **meet the requirements of Art.33(2) and Art.33(3) PCT.**